

Impact of Smokefree Restaurant Ordinance on Revenues for Maryville, Missouri

November 29, 2004

Stanley R. Cowan, R.S.⁺, Thomas Kruckemeyer⁺⁺, Jamie Baker^{*}, and Teri Harr, R.N.^{**}

ABSTRACT Health professionals are acutely aware of the health risks secondhand smoke presents to employees and the public. However, many business owners and policymakers fear a smokefree ordinance will harm profits, particularly for restaurants. An ordinance for smokefree restaurants was enacted in Maryville, Missouri on June 9, 2003. Taxable sales receipts data obtained from the Missouri Department of Revenue allowed comparison of Maryville and statewide data for eating and drinking places and for total retail sales receipts. Taxable sales receipts for eating and drinking places in Maryville after enactment of the smokefree restaurant ordinance increased at more than twice the rate for eating and drinking places the state and twice the rate for retail sales in Maryville.

Secondhand smoke has been determined to be a significant risk to the health of nonsmokers by the Surgeon General, the Environmental Protection Agency and a number of other governmental and non-governmental agencies. Some of the diseases associated with increased risks due to exposure to secondhand smoke include heart disease, lung cancer, stroke and emphysema in adults; and asthma and SIDS in children.^{1,2,3}

In the not so distant past, it was normal and customary that smoking was allowed in any part of a public place. Society has gradually changed to establish smoking and nonsmoking sections in the belief that separation was sufficient to provide relief to nonsmokers. However, as more information becomes known that secondhand smoke is not merely an annoyance, but is in fact a *de facto* risk to health, more public places and workplaces are becoming completely smokefree.

A growing number of employers are adopting smokefree workplace policies for the sake of their employees' health, as well as for the increasingly clear economic benefits of lowered health insurance claims and premiums, lowered maintenance and replacement expenses, and increased employee productivity.^{4,5} Likewise, an increasing number of cities and states are enacting smokefree indoor air ordinances to protect employees and customers from secondhand smoke exposure. As of July, 2004, ten states (California*, Connecticut, Delaware*, Florida*, Idaho, Maine, Massachusetts*, Rhode Island, New York*, and Utah) and 300+ municipalities have passed laws for smokefree restaurants⁶ (states marked with an asterisk have smokefree laws that also include other workplaces and public places).

⁺Stanley R. Cowan, R.S., Program Coordinator for Tobacco Use Prevention, Health Promotion Unit, Missouri Department of Health & Senior Services

⁺⁺Thomas Kruckemeyer, retired Chief Economist for the Missouri Office of Administration, Division of Budget & Planning.

^{*}Jamie Baker, Community Policy Specialist, Health Promotion Unit, Missouri Department of Health & Senior Services

^{**}Teri Harr, R.N, Health Education Coordinator, St. Francis Hospital and Health Services, Maryville, Missouri

Requests for reprints or information should be sent to Stanley R. Cowan, Missouri Department of Health & Senior Services, P. O. Box 570, Jefferson City, Missouri 65102 e-mail stan.cowan@dhss.mo.gov

On June 9, 2003, Maryville, Missouri, implemented an ordinance for all restaurants to become smokefree. An exemption was made for stand-alone bars with at least 70% sales in alcohol. Of thirty-seven eating and drinking places, seven (19%) qualified for the exemption. This was the first such ordinance in Missouri to completely prohibit smoking in all restaurants.

While the health aspects are clear, understandably there has been anxiety among restaurant owners as to whether such an ordinance would harm their profits. To assess this, the Missouri Department of Health & Senior Services, with review provided by a former Chief Economist for the Missouri Office of Administration's Division of Budget and Planning, analyzed quarterly sales tax data for 5 years preceding and for one year following the ordinance implementation date (July 1998 through June 2004). The results of that analysis determined that no detrimental changes in revenues for eating and drinking places occurred after the ordinance took effect. These findings are consistent with those from studies of smokefree ordinances in other U.S. cities.^{7,8,9,10,11,12,13,14}

Materials and Methods

Taxable sales receipts beginning July, 1998 through June, 2004 for Maryville and for Missouri were obtained from the Missouri Department of Revenue for eating and drinking places [standard industry code 581] (Table 1) and total retail sales (Table 2).

Several comparisons were viewed to help determine if changes occurred. These include:

- 1) Taxable sales data for eating and drinking places and for total retail sales in Maryville, as well as for statewide figures for eating and drinking places sales and for total retail sales, were compared as an indicator of any overall economic factors that may affect revenues irrespective of the Maryville ordinance.
- 2) Quarters were compared to corresponding quarters of previous years to identify any differences not due to seasonal trends.
- 3) The 1-year period for when the Maryville ordinance was in effect was compared to corresponding 1-year periods for previous years for total retail sales as well as for Missouri in both eating and drinking places and total retail sales.

Results

Table 1 shows that according to the quarterly average percent change from their previous year, taxable sales for eating and drinking places in Maryville increased moderately for three of the four years prior to the effective date of their smokefree restaurant ordinance. The greatest increase was noted in FY 1999-2000, the first year in which a comparison was made. The year immediately prior to the effective date of the ordinance, FY 2002-2003, showed a decrease of -1.84%; and the first full year after the ordinance, FY 2003-2004, showed an increase of 11.35%, the greatest increase noted for any of the years in the study period. In comparison, taxable sales for eating and drinking places in Missouri

displayed moderate increases for every year culminating in the greatest increase also being in FY 2003-2004 at 5.25%.

TABLE 1

Taxable Sales for eating and drinking places - Missouri Department of Revenue

Maryville	FY 1998-1999 \$	FY 1999-2000 \$	% change from previous year	FY 2000-2001 \$	% change from previous year	FY 2001-2002 \$	% change from previous year	FY 2002-2003 \$	% change from previous year	FY 2003-2004 \$	% change from previous year
Jul-Sep	3,148,466	3,208,312	1.90%	3,300,003	2.86%	3,405,728	3.20%	3,425,943	0.59%	3,481,703	1.63%
Oct-Dec	2,955,000	3,331,885	12.75%	3,349,779	0.54%	3,512,884	4.87%	3,390,666	-3.48%	3,588,099	5.82%
Jan-Mar	2,987,702	3,234,630	8.26%	3,160,375	-2.30%	3,251,075	2.87%	3,126,076	-3.84%	3,843,968	22.96%
Apr-Jun	3,261,139	3,293,913	1.00%	3,344,712	1.54%	3,499,454	4.63%	3,475,159	-0.69%	4,221,303	21.47%
TOTAL	12,352,307	13,068,740	5.80%	13,154,869	0.66%	13,669,141	3.91%	13,417,844	-1.84%	15,135,073	11.35%
quarterly average	3,088,077	3,267,185	5.80%	3,288,717	0.66%	3,417,285	3.91%	3,354,461	-1.84%	3,783,768	11.35%

Missouri	FY 1998-1999 \$	FY 1999-2000 \$	% change from previous year	FY 2000-2001 \$	% change from previous year	FY 2001-2002 \$	% change from previous year	FY 2002-2003 \$	% change from previous year	FY 2003-2004 \$	% change from previous year
Jul-Sep	1,426,164,431	1,462,955,929	2.58%	1,494,103,825	2.13%	1,519,317,180	1.69%	1,580,045,669	4.00%	1,661,424,872	5.15%
Oct-Dec	1,336,265,742	1,358,741,240	1.68%	1,341,954,988	-1.24%	1,425,179,212	6.20%	1,457,052,724	2.24%	1,531,001,020	5.08%
Jan-Mar	1,222,859,998	1,298,820,639	6.21%	1,309,088,209	0.79%	1,353,269,598	3.37%	1,368,629,869	1.14%	1,474,018,741	7.70%
Apr-Jun	1,432,070,282	1,451,325,492	1.34%	1,481,383,381	2.07%	1,556,340,645	5.06%	1,592,365,985	2.31%	1,664,247,353	4.51%
TOTAL	5,417,360,453	5,571,843,300	2.85%	5,626,530,403	0.98%	5,854,106,635	4.04%	5,998,094,247	2.46%	6,330,691,986	5.25%
quarterly average	1,354,340,113	1,392,960,825	2.85%	1,406,632,601	0.98%	1,463,526,659	4.04%	1,499,523,562	2.46%	1,582,672,997	5.25%

NOTE : data in bold indicates Maryville smokefree restaurant ordinance in effect

Taxable sales for all retail places for Maryville and Missouri (Table 2) has data for all retail sales in Maryville somewhat similar to that of their eating and drinking places with moderate increases in all years with the same exception of a decrease for FY 2002-2003; and with the final year, FY 2003-2004, having the highest increase at a 5.67% increase. Missouri all retail sales data are similar to Missouri eating and drinking places data with moderate increases for all years, however in this case the final year was not the highest recorded percentage change.

TABLE 2

Taxable Sales for retail places - Missouri Department of Revenue

Maryville	FY 1998-1999 \$	FY 1999-2000 \$	% change from previous year	FY 2000-2001 \$	% change from previous year	FY 2001-2002 \$	% change from previous year	FY 2002-2003 \$	% change from previous year	FY 2003-2004 \$	% change from previous year
Jul-Sep	31,561,426	32,435,591	2.77%	34,271,660	5.66%	34,806,992	1.85%	36,009,254	3.15%	36,304,423	0.82%
Oct-Dec	33,313,096	33,668,253	1.07%	37,290,265	10.76%	39,507,410	5.95%	37,854,125	-4.18%	39,224,471	3.62%
Jan-Mar	28,297,702	30,434,155	7.55%	30,888,174	1.49%	32,854,869	5.72%	33,374,033	2.20%	36,087,111	8.13%
Apr-Jun	30,066,886	32,893,356	9.19%	33,400,011	1.83%	35,407,784	8.01%	34,180,619	-3.47%	38,302,022	12.06%
TOTAL	123,270,910	129,401,355	4.97%	135,850,110	4.98%	142,477,035	4.88%	141,417,031	-0.74%	149,918,027	5.67%
quarterly average	30,817,728	32,350,339	4.97%	33,962,528	4.98%	35,619,259	4.88%	35,354,258	-0.74%	37,479,507	5.67%

Missouri	FY 1998-1999 \$	FY 1999-2000 \$	% change from previous year	FY 2000-2001 \$	% change from previous year	FY 2001-2002 \$	% change from previous year	FY 2002-2003 \$	% change from previous year	FY 2003-2004 \$	% change from previous year
Jul-Sep	15,041,366,799	15,701,444,157	4.39%	16,251,138,413	3.50%	16,501,531,257	1.54%	16,580,311,670	0.48%	17,041,192,299	2.78%
Oct-Dec	15,743,366,936	16,505,419,262	4.84%	16,888,378,462	2.20%	16,999,631,207	0.78%	16,869,200,463	-0.18%	17,845,548,452	3.99%
Jan-Mar	13,851,980,287	14,583,139,463	5.28%	15,175,287,109	4.06%	14,994,068,576	-1.18%	15,002,422,842	0.08%	15,876,086,162	5.82%
Apr-Jun	15,394,130,879	15,958,286,339	3.66%	16,391,792,126	2.65%	16,475,654,810	0.57%	16,588,778,044	0.75%	17,289,207,257	4.03%
TOTAL	60,030,876,911	62,748,269,221	4.53%	64,676,596,110	3.07%	64,970,916,850	0.46%	65,150,713,019	0.26%	67,831,436,170	3.96%
quarterly average	15,007,719,228	15,687,067,305	4.53%	16,169,149,028	3.07%	16,242,729,213	0.46%	16,287,679,255	0.28%	16,957,656,793	3.95%

NOTE : data in bold indicates Maryville smokefree restaurant ordinance in effect

Quarterly data presented in both tables allow comparisons within years and to a degree allow accountability for seasonal sales variations. Of note is that by far the two strongest quarters seen for both tables are the last two quarters of FY 2003-2004 for Maryville eating and drinking places with percent changes from previous year quarters of 22.96% and 21.47% respectively. The strongest quarter for Missouri eating and drinking places was in the third quarter of FY 2003-2004 at 7.70%, about one-third the rate of Maryville's increase.

Discussion

As the general economy began improving in the last year, a comparison of eating and drinking places sales for the last 1-year period with that of the previous year is especially noticeable. For this period when the Maryville ordinance was fully in effect, an increase of 11.35% was seen for taxable sales for eating and drinking places, more than twice that of Missouri's increase of 5.25% for the same time period (Table 1).

General economic trends for Maryville and Missouri can be seen in the revenues for total retail sales in Figure 1. Maryville and Missouri exhibited fairly uniform quarterly seasonal variation with revenues typically higher during the October–December quarter of each year. The overall trend is a slow steady increase in sales for Maryville and Missouri as indicated by the trendlines in Figure 1. From Table 1 it is seen that the four years prior to the smokefree ordinance that

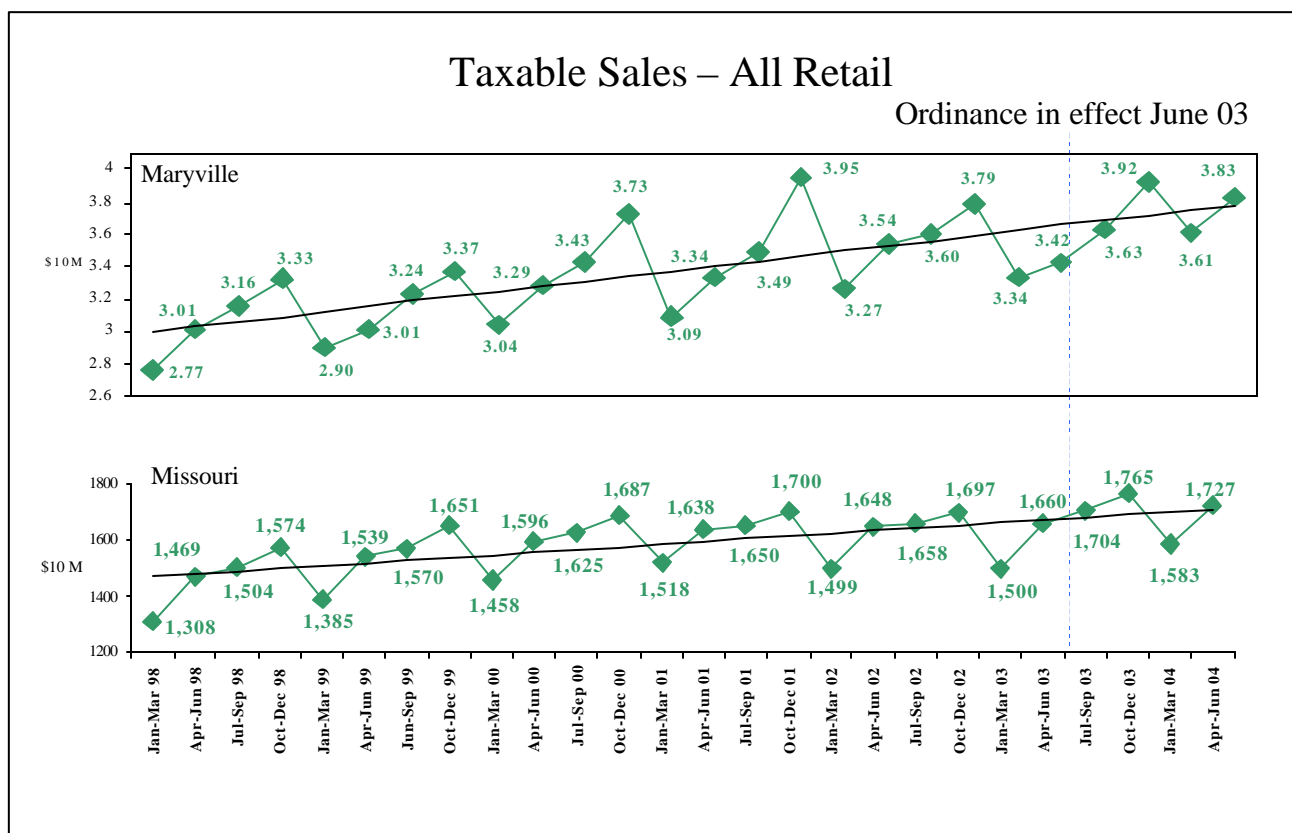


Figure 1 – Total retail sales for Maryville and Missouri

Maryville exhibited an average annual increase of 3.52% and Missouri showed an increase of 2.09%. After the ordinance enactment, both areas experienced a nearly identical increase with Maryville increasing the five-year average by 0.43% and Missouri by 0.37%.

This reflects similar recent overall economic improvement in both areas, especially within the last year of the study period, irrespective of the smokefree ordinance.

In comparison, the trends for eating and drinking places sales differ from that of total retail sales (Figure 2). Eating and drinking places sales for Missouri showed highest quarters were usually April-June and July-September; whereas total retail sales usually are highest in October-December, consistent with holiday shopping. One trend shared in common between eating and drinking places sales and total retail sales was almost always a depressed January-March quarter. However a major exception is noted for Maryville after their ordinance was in effect. Not only was the January-March quarter for 2004 the highest for any January-March quarter during the study period, it was higher than any of all the previous quarters posted.

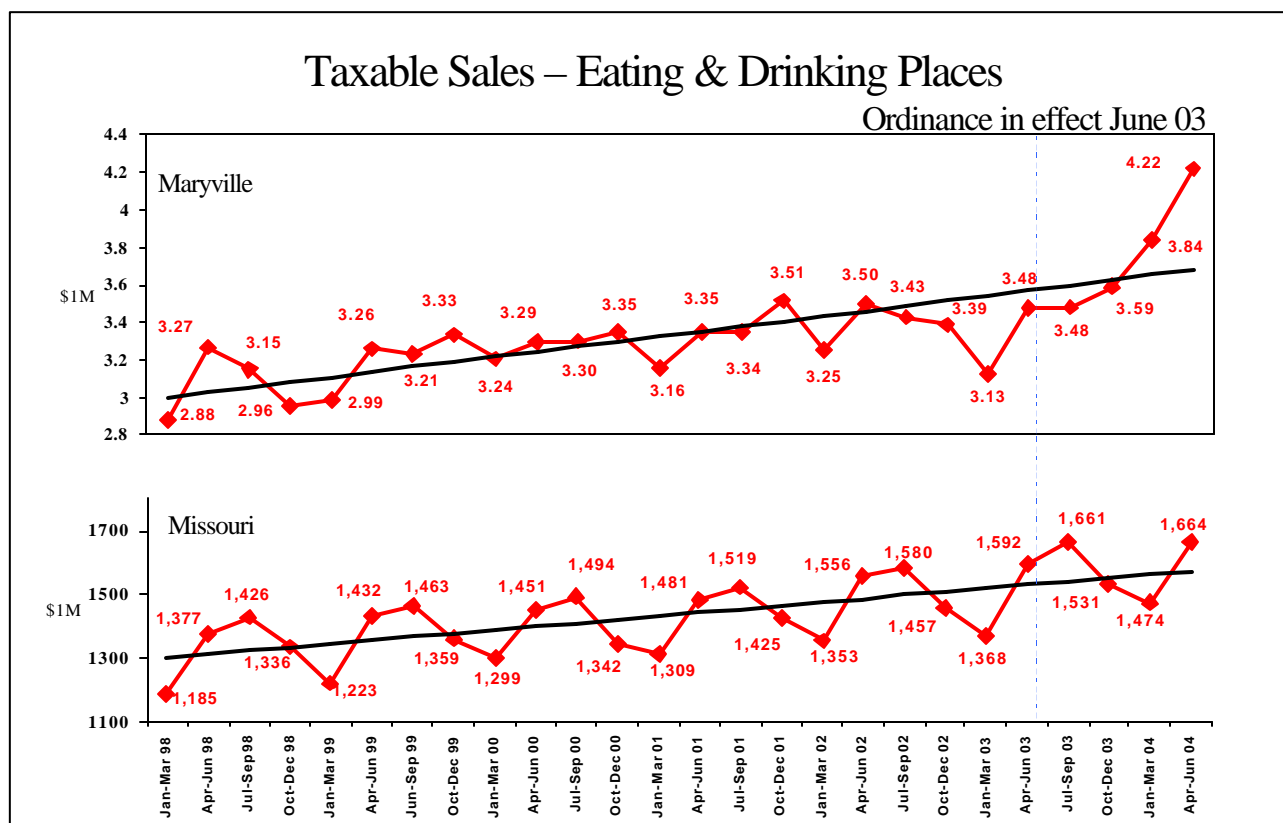


Figure 2 – Eating and drinking places sales for Maryville and Missouri

As with total retail sales, Missouri and Maryville showed a progressively upward trend. For the four years before the Maryville ordinance was in effect, eating and drinking places sales in Maryville increased an average 2.13% per year; slightly less than the pace of the Missouri increase of 2.58%. However, sales for eating and drinking places for the year following the enactment of the smokefree ordinance resulted in a five-year average of a 3.98% increase for Maryville; slightly ahead compared to the Missouri increase of 3.12%.

The trendline for taxable sales for Missouri eating and drinking places shows the quarterly data falling close to expectations (Figure 2). However, the trendline for Maryville shows a marked increase above expectations after the effective date of the smokefree ordinance.

It is also noteworthy in Table 1 that the percentage growth in Maryville's eating and drinking places sales for 2003-2004 was double that of total retail sales for 2002-2003 (11.35% vs. 5.67%); whereas for Missouri it was 1 1/3 times higher (5.25% vs. 3.95%).

Conclusion

Taxable sales for eating and drinking places in Maryville increased 11.35% after enactment of the city's smokefree restaurant ordinance. During the same time period, taxable sales for eating and drinking places in Missouri increased 5.25%, less than half that of Maryville.

These findings are consistent with the results of studies in other municipalities that determined smokefree indoor air ordinances had no effect on eating and drinking places revenues.

Opponents of smokefree indoor air ordinances claim that enacting smokefree indoor air ordinances will harm restaurant revenues. However, the findings of this study indicate that Maryville eating and drinking places revenues were not harmed by a smokefree ordinance. In fact, when compared to Missouri figures, the data indicate the ordinance may have been beneficial for this area of business. While the public health effects of secondhand smoke should be a major consideration for local policymakers, such analyses of economic data can provide these policymakers with additional statistical evidence to evaluate the merit of implementing smokefree indoor air ordinances in communities.

Limitations

Post-ordinance data for this study is limited to the taxable sales data for the first four quarters after the ordinance was implemented. Tax revenue data for Maryville will continue to be monitored.

The Maryville smokefree restaurant ordinance includes restaurants, and restaurants with attached bars; but, does not apply to stand-alone bars. Sales tax data from the Missouri Department of Revenue does not separate stand-alone bars in their Standard Industry Code 581 of "eating and drinking places," but reports them as combined. However, it is doubtful that business increases, if any, at the seven stand-alone bars out of the total of thirty-seven eating and drinking places in Maryville would have increased the quarterly taxable sales for all thirty-seven businesses by an overall 11.35% compared to the previous year.

Data are only available in the aggregate and not available to determine if individual businesses experienced business loss after the enactment of the ordinance. The Nodaway County Health Department provided information that the number of restaurants in Maryville remained essentially the same since the enactment of the Clean Air Act, whereas previously, there were more restaurant closings than openings.

Acknowledgments

This report was prepared by the Health Promotion Unit of the Missouri Department of Health and Senior Services with editing provided by Janet Wilson, MPA, Chief, and formatting of tables and figures

by Eric Branson, Senior Office Support Assistant. The data and report have been reviewed by Tom Kruckemeyer, retired Chief Economist from the Missouri Office of Administration, Division of Budget & Planning.

References

1. The Health Consequences of Involuntary Smoking: A Report of the Surgeon General, U.S. Department of Health and Human Services. 1986.
2. U.S. Environmental Protection Agency. Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders, 1992.
3. California Environmental Protection Agency. Health effects of exposure to environmental tobacco smoke. Sacramento, California: California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 1997.
4. Tyson Foods, Inc. Establishes "Smoke Free" Policy Company-Wide. April 4, 2004. Available at www.tysonfoodsinc.com/corporate/news/viewNews.asp?article=1419
5. Paeth, Greg. Going smokeless-It's just good business, Applebee's franchisee says. Cincinnati Post, May 13, 2004. Available at www.cincypost.com/2004/05/13/smoke051304.html
6. American Nonsmokers' Rights Foundation. Clean indoor air ordinance counts summary. Berkeley, California: American Nonsmokers' Rights Foundation, 2004. Available at www.no-smoke.org/mediaordlist.pdf
7. Glantz SA. Smokefree restaurant ordinances do not affect restaurant business. Period [Editorial]. J Public Health Manag Pract 1999;5:vi--ix.
8. CDC. Assessment of the impact of a 100% smokefree ordinance on restaurant sales---West Lake Hills, Texas, 1992--1994. MMWR 1995; 44:370--2.
9. Glantz SA, Smith LR. The effect of ordinances requiring smokefree restaurants and bars on revenues: a follow-up. Am J Public Health 1997;87:1687--93.
10. Glantz SA. Effect of smokefree bar law on bar revenues in California. Tob Control 2000;9:111--2.
11. Glantz SA, Charlesworth MA. Tourism and hotel revenues before and after passage of smokefree restaurant ordinances. JAMA 1999; 281:1911--8.
12. New York City Department of Health and Mental Hygiene, *EMPLOYMENT UP IN CITY BARS AND RESTAURANTS SINCE IMPLEMENTATION OF THE SMOKE-FREE AIR ACT*, July 23, 2003

13. North Dakota Center for Persons with Disabilities, Minot State University, *Study Finds Smoke-Free Ordinance Hasn't Hurt Restaurants*, June 5, 2003
14. Impact of a Smoking Ban on Restaurant and Bar Revenues — El Paso, Texas, 2002, Center for Disease Control & Prevention, Morbidity & Mortality Weekly Report February 27, 2004/ Vol. 53 / No. 7